

FIBER OPTIC SENSING DEVICE FOR MEASURING A PHYSICAL PARAMETER

Abstract

A fiber optic sensing device uses a Fabry-Perot cavity to sense a physical parameter. The cavity modulates the incident polychromatic light. The modulated light is recorded by an optical spectrometer means. The spectrum is analyzed in a signal processing unit which normalizes the spectrum and determines the phase of the modulated signal. The phase, accumulated over whole range of wavelengths, has been used for identification of the physical parameter using a look-up-table. The cavity, the polychromatic light source and the spectroscopy means are connected by fiber optic means.